

## REMARKS

Applicant is canceling certain claims and amending others as set forth above in order to better define the invention and to overcome the objections under 35 U.S.C. §112. Applicant is amending the specification to match the terminology in the amended claims with the specification. Applicant requests approval to amend Figures 1A-1E, Figure 2, Figure 3, Figure 4, Figure 6 and Figure 9 as marked in red in the attached copies.

All of the amended claims require a woven textile pre-form having a base and a pair of legs. All of the amended claims require the use of pressure intensifiers 18 (Figure 4) of flexible material that are inserted into the vacuum bag in contact with the perform base and legs. Pressure intensifiers 18 are shown as three-sided polygons, preferably triangular in cross-section. For a pre-form 14 having a pi-shape with 90° corners between the base and the legs, the pressure intensifiers 18 are generally in configuration of a right triangle with sides 19, 21 forming a 90° corner. Exterior side 23 extends generally at a 45° angle between edges of sides 19, 21, however, is concave in the preferred embodiment. A line 25 normal to exterior side 23 intersects the corner of sides 19 and 21. The triangular configuration directs some of the vacuum bagging forces into the corner of the pre-form defined by base 13 and leg 15. A first pre-cured member on the opposite side of base 13 reacts against some of the forces. A second pre-cured member is located within the slot, thus some of the forces imposed by the pressure intensifiers acts against the second pre-cured member.

The Examiner discussed the references in regard to pressure intensifiers in paragraph 11 of the office action March 19, 2003. Two references were cited showing pressure intensifiers. The McKague reference, U.S. Patent 6,374,570, is not a reference under 35 U.S.C. §102 or 103 because it was co-pending with this application. The assignee of this application was at the time

the invention was made and still is the same as the assignee of the '570 patent. Applicant is enclosing a copy of the recorded assignment of this application.

Regarding the Barnes reference, Figure 25 shows silicon rubber blocks 221 that are rectangular in cross-section, not triangular as shown in the preferred embodiment of this application. Blocks 221 are located within cavities formed by surfaces 53, 61 and 81. Blocks 221 are located side-by-side and separated by an uncured laminated rib 61. There is no suggestion of a pre-cured structure located between blocks 221. Vacuum bagging causes forces to be exerted through the against the surfaces 53, 61 and 81.

Applicant, however, uses pressure intensifiers to apply pressure of the two legs 15 against a second pre-cured member located between the legs. Applicant's pressure intensifiers 18 also apply pressure to the base against a first pre-cured member. It is an important feature of this invention that the forces on exterior side 23 of each pressure intensifier 18 push against base 13 and a leg 15, the forces being reacted by first and second pre-cured composite structures. Combining Barnes with the Figure 6 embodiment of Abildskov would suggest placing silicon rubber blocks on both sides of and between fibers 138, 142, not inserting a pre-cured composite between fibers 138, 142. Breuer discloses vacuum bagging at column 7, lines 30 and following. However, Breuer does disclose flexible pressure intensifiers that would be enclosed within the vacuum bag.

Claim 13 as amended requires each of the pressure intensifiers have an exterior side (23) that extends from an edge of said base side (19) to edge of said leg side (51). This requirement is not suggested by Barnes. Barnes' blocks are rectangular in cross-section, thus do not have an exterior side that extends from an edge of a base side to an edge of a leg side. Rather the exterior side of block 221 in Barnes extends from an edge of a leg side to an edge of another leg side.

Such a pressure intensifier would not be suitable for Applicant's purpose because it would not direct the desired forces into the corner. None of the other references suggests a pressure intensifier as claimed.

Claim 14 depends from claim 13, requiring that the base side and the leg side be at right angles to each other. Claim 17 requires that the base side and the leg of each of the pressure intensifiers be equal in length. Claim 18 requires that the exterior side of each of the pressure intensifiers be concave. Claim 23 depends from claim 13, specifying that a line extending normal to the exterior side of the pressure intensifier passes through a corner formed by a junction of the base with one of the legs. This provides an intensified force directed to the corner, to reduce a buildup of resin in the corner during curing. The references do not suggest these features.

Claim 24 also requires a preform with a base and a pair of legs. It requires that the legs extend from the base at a 90° angle. It requires pressure intensifiers, each being triangular in cross-section. The pressure intensifiers of Barnes are rectangular in cross-section, not triangular. The claim requires a second pre-cured laminated composite structure between the legs and a first pre-cured structure against the base on opposite sides of the legs. Barnes teaches pressure intensifiers 221 that are separated by a laminated rib 61 that is being formed. There is no suggestion of a pre-cured structure located on an opposite side of rib 61 from one of the intensifiers 221.

Claim 25 requires a concave exterior side on each of the pressure intensifiers. This is not suggested in the references. Claim 26 requires that a line normal to the exterior side bisect a corner defined by an intersection of the base and one of the legs. Claim 32 requires that the base side and leg side of each of the pressure intensifiers be of the same length.

Claim 39 requires that the legs and the base of the preform have tapered edges.. This feature was addressed by the examiner in paragraph 14 of the previous office action. Mueller shows adhesive strips 27 that form a tapered structure. However, the adhesive strips are not woven performs that taper in thickness. Rather Mueller suggests applying layers of adhesive strips over one another to form a laminate, not using a three dimensional woven pre-form bonding two pre-cured structures together. Mueller's adhesive strips are of constant thickness, and partially overlapping them creates the tapered in the composite structure. Abildskov shows a woven preform in Figure 6, however, it is of a single layer and does not taper in thickness. Claim 45 also requires tapered edges on the pre-form, but it depends from claim 13.

Claim 46 requires that each of the pressure intensifiers be a three-sided polygon in cross-section. It requires two straight inner sides intersecting each other to define a corner and an exterior side that extends between the edges of the inner sides. This is not met by the four-sided polygon of Barnes.

Applicant respectfully submits that the claims are now in condition for allowance and favorable action is respectfully requested. The Commissioner is hereby authorized to charge any additional fees which may be required or credit any overpayment to Bracewell & Patterson Deposit Account No. 50-0259 (0408RF.045513).

Respectfully submitted,

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